



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
PO Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,473	02/07/2001	Ofer Du-Nour	1639/14	4653

7590 09/02/2003

DR MARK FRIEDMAN LTD  
c/o Bill Polkinghorn-Discovery Dispatch  
9003 Florin Way  
Upper Marlboro, MD 20772

EXAMINER

TURNER, SAMUEL A

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/762,473	DU-NOUR, OFER	
	<b>Examiner</b>	<b>Art Unit</b>	
	Samuel A. Turner	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-34 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 07 February 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_.

**Office Action**

**Specification**

The title of the invention is not descriptive. A new title is required that is clearly indicative of the **invention** to which the claims are directed.

The abstract of the disclosure is objected to because the abstract must be on a separate sheet within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).

**Drawings**

The drawings are objected to because figures 1-2 must be labeled as prior art. Correction is required.

**Preliminary Amendments**

The preliminary amendment filed 7 February 2001 amending claims 1-34 has been entered.

**Rejections Under 35 U.S.C. § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 30 rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 30 there is no antecedent basis for "said coating applicator". Claim 29 provides for a film applicator.

### **Rejections Under 35 U.S.C. § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 14, 22, 24-26, 31, and 34 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Kondo(4,984,894).

Kondo teaches an apparatus for measuring film thickness comprising a broadband light source(10) for illuminating a film, imaging optics(18), film(S), spectroscopic unit(32) which detects the intensity of the light reflected from the film(figure 4) and produces a signal defining the intensity variations(figure 3), and processor(34) which determines the thickness of the film based on the different frequencies of the signal. See figure 6.

FIG. 3

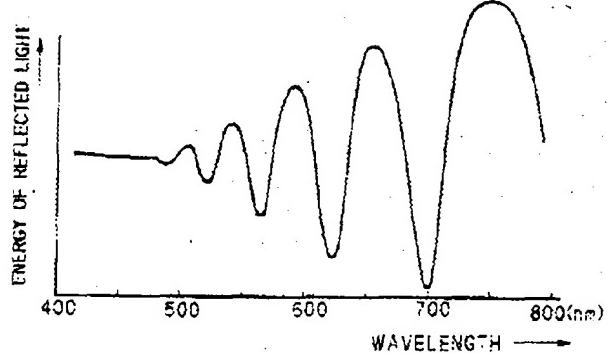


FIG. 4

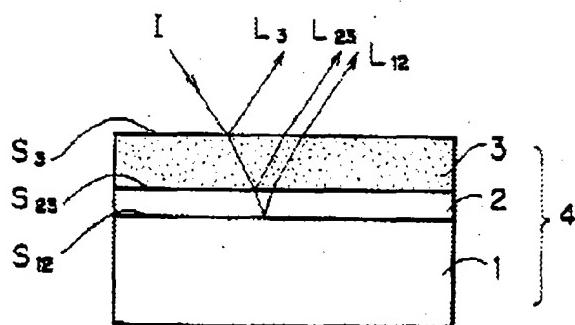
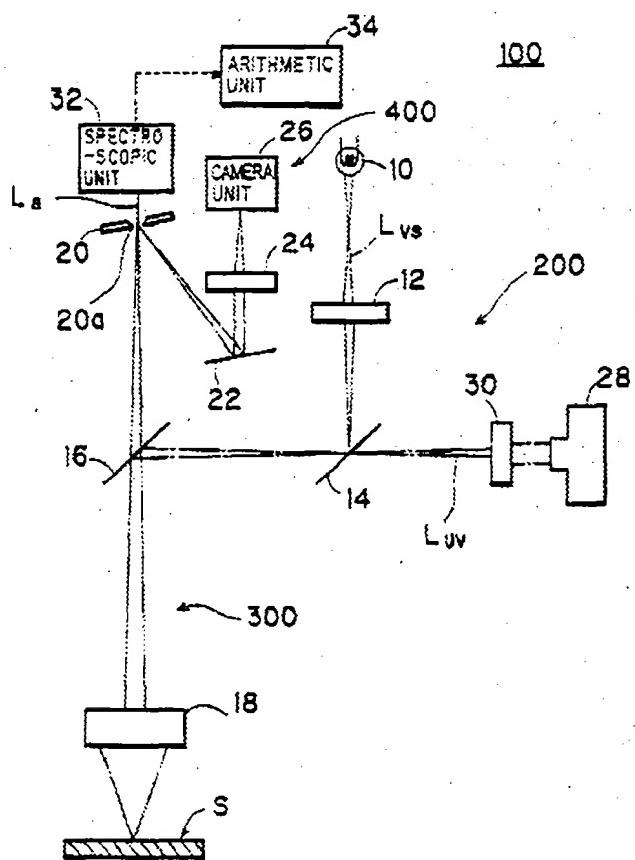


FIG. 6



**Rejections Under 35 U.S.C. § 103**

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-13, 15-21, 27-30, 32, and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kondo(4,984,894).

Kondo teaches using the thickness measuring apparatus in the fabrication of semiconductor devices, however the specific structures of the prior art fabrication devices are not disclosed.

Official notice is taken that the various structures of the fabrication devices are known in the prior art including a rotary drive table, hot plate, film applicator, scanning the head, or providing a plurality of heads. See In re Malcolm, 1942 C.D 589; 543 O.G. 440.

With regard to claims 27-30, 32, and 33; it would have been obvious to one of ordinary skill in the art to use the apparatus disclosed by Kondo in any of the film application, deposition, or etching devices.

With regard to claims 7-13; these claims appear to be intended use claims in wherein clauses which do not further limit the claimed method however as with

Art Unit: 2877

claims 27-30, 32, and 33; it would have been obvious to one of ordinary skill in the art to use the apparatus disclosed by Kondo in any of the film application, deposition, or etching devices.

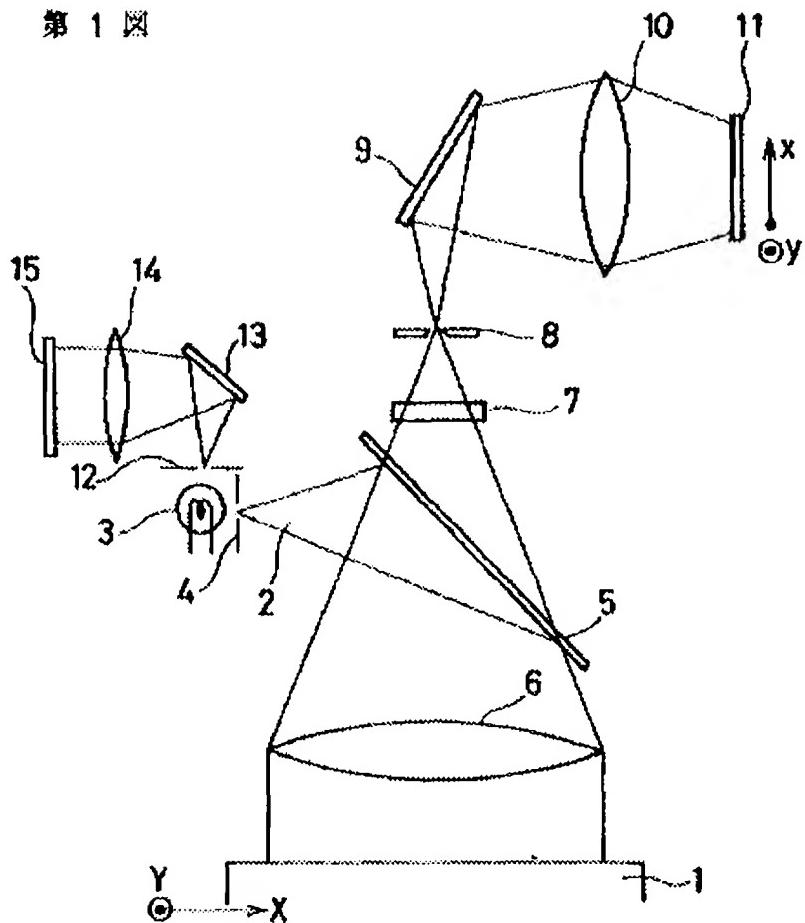
With regard to claims 15-21; it would have been obvious to one of ordinary skill in the art to apply any of the mathematical or electrical decompositions disclosed by applicant as prior art, page 8 of the specification, in order to select the desired frequencies indicative of film thickness.

Claims 6 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kondo(4,984,894) as applied to claims 7-13, 15-21, 27-30, 32, and 33 above, and further in view of Masayuki et al(01-304304).

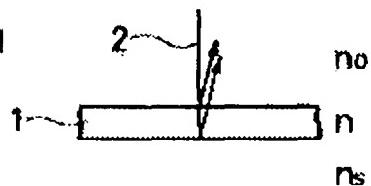
Kondo teach a scanning diffraction grating and detector, column 5, lines 4+ to detect the intensities of the various frequencies and not a detector positioned to detect each frequency.

Masayuki et al teaches an alterative spectroscopic analyzer which includes a stationary grating(9), and an array of detectors(11) which provides a detector for each frequency.

第 1 図



第 2 図



It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the spectroscopic arrangement of Masayuki over that of Kondo because all frequencies are detected simultaneously with the detector array.

Art Unit: 2877

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel A. Turner those telephone number is **(703) 308-4803**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font, can be reached on (703) 308-4881.

The fax phone number for this Group is (703) 308-7722. The faxing of papers related to this application must conform with the notice published in the Official Gazette, 1096 O.G. 30 (15 November 1989). The Group receptionist telephone number is (703) 308-0956.

Any inquiry of a technical nature regarding reissues, petitions, and terminal disclaimers should be directed to Hien Phan whose telephone number is (703) 308-7502, or Ed Westin whose telephone number is (703) 308-4823.

Any other inquiry of a technical nature, and all inquiries of a general nature including those relating to the status of this application or any patent term adjustment should be directed to TC2800 Customer Service Office whose telephone number is (703) 306-3329.



Samuel A. Turner  
Primary Examiner  
Art Unit 2877

SAT  
8/25/03